

# NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

## INTERIM

### LONG TERM NO-TILL

(Acre)

Code 778

#### DEFINITION

Planting all crops for at least five consecutive years in 80%, or more, residue from the existing crops, and/or cover crops, with no soil surface width disturbance greater than 25% of the row spacing.

#### PURPOSE

To reduce wind and water erosion; improve rainfall infiltration; improve soil quality; improve ground and surface water quality; and to reduce agricultural inputs required to produce food and fiber.

#### CONDITIONS WHERE PRACTICE APPLIES

On any cropland where adequate ground cover is maintained. Applies to crop rotations that include fallow periods as well as annual planting. When fallow periods are included, no surface soil disturbance is allowed.

#### CRITERIA

1. A minimum of 80% ground cover is required at planting. The line transect method as described in Section IV of the NRCS Technical Guide, standard 329, Conservation Tillage, should be used to determine the percent ground cover.

2. Any tillage needed for restrictive layer management, herbicide applications, etc., is allowed; however, the 80% ground cover must be met.
3. The five year period for long term no-till begins with the first crop at planting time and ends with the last crop at harvest.
4. Soil disturbance during the harvest of crops should be held to a minimum.
5. Soil tests should be made every 2-3 years. Sample to a depth of 4 inches, not deeper as for conventional tillage systems.

#### CONSIDERATIONS

1. Fields should not have severe infestations of weeds that are difficult to control (Bermudagrass, Johnsongrass, Dallisgrass, etc.)
2. Where soil amendments such as lime or phosphorus need to be incorporated, do so before starting a long-term no-till system. Once appropriate levels are achieved, they should be maintained by surface applications.

3. A heavy residue must be maintained throughout the crop rotation with the goal of 80% ground cover, which may prohibit gleaning, haying, or grazing. If required, cover crops must be established at plant populations that will provide adequate residue for no-till planting.
4. All cover crops must be allowed to reach a reasonable level of maturity before herbicide "burndown", prior to planting. Suggested planting rates and planting dates can be found in the NRCS Technical Guide Standard, 340, Cover and Green Manure Crop.
5. The earliest allowable herbicide burndown for legumes will be early bloom. The earliest allowable burndown for grasses will be early boot.
6. Surface leveling may be needed prior to beginning a long-term no-till system.

## **PLANS AND SPECIFICATIONS**

Plans and specifications shall be prepared in accordance with this standard and shall describe the requirements for applying the practice to achieve its intended uses.

## **OPERATION AND MAINTENANCE**

Operation and maintenance (O & M) shall be in accordance with the requirements of this standard.